CLAIMS

What is claimed is:

1. A method for viewing a vessel in an image with a three-dimensional volume, comprising the steps of:

(a) determining in the view plane of said image a plurality of boundary pairs defining said vessel;

(b) determining at least one vessel-intensity for each one of said boundary pairs; and

(c) viewing in the projection plane of said image said plurality of boundary pairs and said associated vessel-intensities.

2. The method as set forth in claim 1, further comprising the step of determining and viewing at least one context-intensity in the area surrounding each one of said plurality of boundary pairs.

3. The method as set forth in claim 1, further comprising the step of fine-tuning said boundary pairs and said vessel-intensities.

4. The method as set forth in claim 1, further comprising the step of filtering said boundary pairs.

5. The method as set forth in claim 1, further comprising the step of specifying a minimum boundary pair in case a boundary pair is close to zero.

6. The method as set forth in claim 1, further comprising the step of estimating a boundary pair using neighboring boundary pairs.

7. The method as set forth in claim 1, further comprising the step of including a calcium region located near said boundary pairs in said determination of said boundary pairs.

8. The method as set forth in claim 1, further comprising the step of excluding a bone region located near said boundary pairs from said determination of said boundary pairs.

9. A method for viewing a structure of interest in an image with a three-dimensional volume, comprising the steps of:

(a) selecting a start-point and an end-point encompassing said structure of interest in a plane of said image; and

(b) for each of a plurality of pixels defined in said plane

(i) projecting a line in the view direction of said plane,

(ii) determining a boundary pair defining said structure of interest along said line,

(iii) determining a first intensity for said structure of interest enclosed by said boundary pair,

(iv) determining a second intensity for structures surrounded by said boundary pair,

(v) re-determining said boundary pair using said first intensity and said second intensity,

(vi) re-determining said first intensity for said re-determined boundary pair, and

(vii) assigning said re-determined first intensity and said re-determined boundary pair to said pixel associated with said line.

10. The method as set forth in claim 9, further comprising the step of determining at least one context-intensity in the area surrounding said boundary pair.

11. The method as set forth in claim 9, further comprising the step of filtering said boundary pairs.

12. The method as set forth in claim 9, further comprising the step of specifying a minimum boundary pair in case a boundary pair is close to zero.

13. The method as set forth in claim 9, further comprising the step of estimating a boundary pair using neighboring boundary pairs.

14. The method as set forth in claim 9, further comprising the step of excluding one or more boundary pairs based on a threshold.

15. The method as set forth in claim 9, further comprising the step of estimating a boundary pair using neighboring boundary pairs.

16. The method as set forth in claim 9, further comprising the step of including a calcium region located near said boundary pair in said determination of said boundary pair.

17. The method as set forth in claim 9, further comprising the step of excluding a bone region located near said boundary pair from said determination of said boundary pair.

18. A method of generating a movie of a structure of interest, comprising the steps of:

(a) defining a plurality of image projection planes;

(b) for each one of said projection planes determining a plurality of boundary pairs defining said structure of interest in the view plane associated with said projection plane;

(c) determining at least one intensity for said structure of interest associated with each one of said boundary pairs;

(d) defining said view of said structure of interest by said plurality of boundary pairs and said associated intensities determined in each of said plurality of projection planes; and

(e) sequencing through said plurality of projection planes.

19. The method as set forth in claim 18, further comprising the step of determining and viewing at least one context-intensity in the area surrounding each one of said plurality of boundary pairs.

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